

*REMARKS/ARGUMENTS**The Pending Claims*

Claims 1-30 are currently pending. The pending claims are directed to fumed metal oxide particles and a process for producing the same. Reconsideration of the claims is respectfully requested in view of the remarks herein.

Discussion of the Claim Amendments

Claim 1 has been amended, for clarification, to further emphasize that injecting the stream of the liquid feedstock into the stream of combustion gas atomizes the liquid feedstock and forms a reaction mixture comprising the combustion gas and the atomized liquid feedstock. The atomized liquid feedstock is subjected to a sufficient temperature and residence time in the combustion gas stream for fumed metal oxide particles to form before the combustion gas temperature is reduced below the solidifying temperature of the fumed metal oxide particle. This clarification is consistent with the entirety of the disclosure of the pending application. Support for these amendments also can be found at, for example, paragraphs [0019], [0020], [0022] – [0024], and [0026] of the specification. No new matter has been added by way of these amendments.

Summary of the Office Action

The Office Action of October 12, 2006, sets forth the following rejections, which are maintained by the Advisory Action of February 20, 2007:

(a) claims 1, 2, 6-9, 13-16, 18-19, and 23-30 under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent 5,075,090 (Lewis et al.) (“the Lewis ‘090 patent”),

(b) claims 10-12 under 35 U.S.C. § 102(b) as allegedly anticipated by the Lewis ‘090 patent or, in the alternative, under 35 U.S.C. § 103(a) as allegedly obvious over the Lewis ‘090 patent,

(c) claims 1-3, 7-10, 13-14, 17-18, 20, and 25-30 under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent 5,340,560 (Rohr et al.) (“the Rohr ‘560 patent”), and

(d) claims 1-6 and 13-24 under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent 6,887,566 (Hung et al.) (“the Hung ‘566 patent”).

Applicants request reconsideration and withdrawal of these rejections for the reasons set forth below.

Summary of the Examiner Interview

Applicants thank Examiner Paul Wartalowicz for the courtesies extended to Applicants’ representatives, John Kilyk, Jr., and Ashlee B. Mehl, during the telephonic interview of March 20, 2007. The rejections based on the Lewis ‘090 patent, the Rohr ‘560 patent, and the Hung ‘566 patent were discussed, consistent with the claim amendments and remarks set forth herein.

Discussion of the Anticipation and Obviousness Rejections

The Advisory Action maintains the rejection over the Lewis ‘090 patent because, according to the Advisory Action, the pending method claims were interpreted as not limited to a method in which the stream of liquid feedstock is atomized as a result of being injected into the stream of combustion gas. However, as further clarified by the amendment of claim 1, the stream of liquid feedstock is atomized by injection into the stream of combustion gas (see element (c) of amended claim 1 which reads in relevant part: “injecting the stream of the liquid feedstock into the stream of combustion gas to thereby atomize the liquid feedstock”). The Lewis ‘090 patent discloses atomization of a mixture of the liquid feedstock and hexane (col. 4, line 64 – col. 5, line 9), *followed by* introduction of a combustion gas (col. 5, lines 13-17), but does not disclose atomization by injection into the stream of combustion gas as required by the pending method claims. Accordingly, the Lewis ‘090 patent does not disclose the subject matter of the pending method claims.

The Advisory Action maintains the rejection over the Rohr ‘560 patent because, according to the Advisory Action, the Rohr ‘560 patent, which does not explicitly disclose

atomization of the liquid feedstock, inherently teaches that the liquid feedstock is atomized. However, the Rohr '560 patent does not disclose that the stream of liquid feedstock is atomized by injection into the stream of combustion gas (see element (c) of amended claim 1 which reads in relevant part: "injecting the stream of the liquid feedstock into the stream of combustion gas to thereby atomize the liquid feedstock"), and that the atomized liquid feedstock forms fumed metal oxide particles (see element (d) of amended claim 1 which reads in relevant part: "subjecting the atomized liquid feedstock to a sufficient temperature and residence time in the combustion gas stream for fumed metal oxide particles to form"). The Rohr '560 patent discloses production of fumed metal oxide particles, but does not disclose that the liquid feedstock is atomized by injection into the stream of combustion gas prior to conversion to the fumed metal oxide particles as required by the pending method claims. Accordingly, the Rohr '560 patent does not disclose the subject matter of the pending method claims.

The Advisory Action maintains the rejection over the Hung '566 patent because, according to the Advisory Action, the pending method claims are not limited to any specific order with respect to injection into the stream of combustion gas and atomization. However, as further clarified by the amendment of claim 1, the stream of liquid feedstock is atomized by injection into the stream of combustion gas (see element (c) of amended claim 1 which reads in relevant part: "injecting the stream of the liquid feedstock into the stream of combustion gas to thereby atomize the liquid feedstock"). The atomized liquid feedstock forms fumed metal oxide particles (see element (d) of amended claim 1 which reads in relevant part: "subjecting the atomized liquid feedstock to a sufficient temperature and residence time in the combustion gas stream for fumed metal oxide particles to form"). The Hung '566 patent does not disclose injection of a liquid feedstock comprising a volatilizable non-halogenated metal oxide precursor into a combustion gas to thereby atomize the liquid feedstock as required by the pending claims. Accordingly, the Hung '566 patent does not disclose the subject matter of the pending method claims.


With respect to pending product claims 25-30, the Advisory Action maintains the rejections over both the Lewis '090 patent and the Rohr '560 patent. According to the Office Action of October 12, 2006, because the Lewis '090 patent and the Rohr '560 patent each teach the claimed process, they each inherently disclose the product that results from the

process. Thus, the Office Action's rejections of claims 25-30 based on the Lewis '090 patent and the Rohr '560 patent are predicated on the assumption that each discloses the claimed process. As further clarified by the amendment to claim 1, and as discussed above, this assumption is incorrect. Accordingly, it cannot be presumed that either of the Lewis '090 patent or the Rohr '560 patent inherently discloses the subject matter of the pending product claims.

Conclusion

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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